

Claims

What is claimed is:

1. Apparatus for indicating an apparent error in the operation of a fluid-powered thread-forming attachment mounted on a machine tool for controlled
5 movement toward and away from a workpiece upon which a thread is to be formed, comprising:
 - a fluid-powered actuator for selectively moving said thread-forming attachment relative to said workpiece during a thread-forming cycle;
 - a sensor operatively arranged to monitor the pressure of fluid within said
10 actuator during at least a portion of said cycle, and to provide an output signal;
 - a programmable logic unit provided with said sensor output signal, arranged to store minimum and a maximum permissible fluid pressure values expected during said cycle, and operatively arranged to indicate an apparent error in the formation of a thread on said workpiece if the pressure determined
15 by said sensor is not between said stored minimum and maximum values.
2. Apparatus as set forth in claim 1 wherein said sensor is arranged to continuously monitor the pressure of fluid within said actuator.
3. The method of indicating an apparent error in the operation of a fluid-powered thread-forming attachment mounted on a machine tool for controlled
20 movement toward and away from a workpiece upon which a thread is to be formed, comprising the steps of:
 - providing a fluid-powered actuator for selectively moving said thread-forming attachment relative to said workpiece during a thread-forming cycle;
 - sensing the pressure of fluid within said actuator during at least a portion
25 of said cycle, and providing an output signal;
 - determining whether said sensed pressure is between minimum and a

maximum permissible fluid pressure values expected during said cycle, and
indicating an apparent error in the formation of a thread on said work-
piece if said sensed pressure determined by said sensor is not between said
minimum and maximum values.

- 5 4. The method as set forth in claim 3, and further comprising the additional
steps of:
 providing a programmable logic unit;
 supplying said programmable logic unit with said sensed pressure;
 storing said minimum and maximum values in said programmable logic
10 unit.